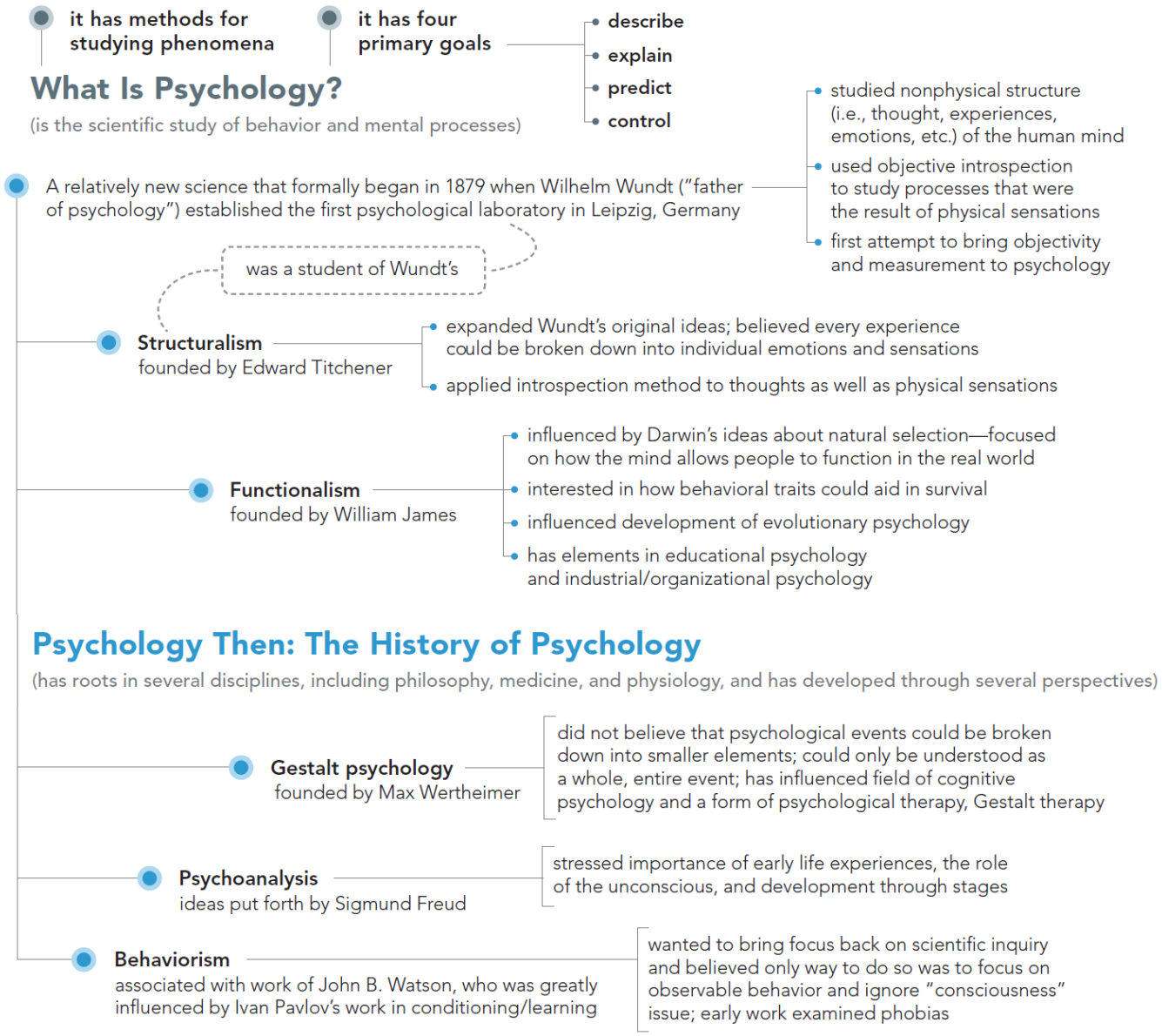
History and Approaches


it has methods for studying phenomena
it has four primary goals
describe
explain
predict
control
What Is Psychology?
(is the scientific study of behavior and mental processes)
A relatively new science that formally began in 1879 when Wilhelm Wundt ("father of psychology") established the first psychological laboratory in Leipzig, Germany
studied nonphysical structure (i.e., thought, experiences, emotions, etc.) of the human mind
used objective introspection to study processes that were the result of physical sensations
first attempt to bring objectivity and measurement to psychology
was a student of Wundt's
Structuralism
founded by Edward Titchener
expanded Wundt's original ideas; believed every experience could be broken down into individual emotions and sensations
applied introspection method to thoughts as well as physical sensations
Functionalism
founded by William James
influenced by Darwin's ideas about natural selection—focused on how the mind allows people to function in the real world
interested in how behavioral traits could aid in survival
influenced development of evolutionary psychology
has elements in educational psychology and industrial/organizational psychology
Psychology Then: The History of Psychology
(has roots in several disciplines, including philosophy, medicine, and physiology, and has developed through several perspectives)
Gestalt psychology
founded by Max Wertheimer
did not believe that psychological events could be broken down into smaller elements; could only be understood as a whole, entire event; has influenced field of cognitive psychology and a form of psychological therapy, Gestalt therapy
Psychoanalysis
ideas put forth by Sigmund Freud
stressed importance of early life experiences, the role of the unconscious, and development through stages
Behaviorism
associated with work of John B. Watson, who was greatly influenced by Ivan Pavlov's work in conditioning/learning
wanted to bring focus back on scientific inquiry and believed only way to do so was to focus on observable behavior and ignore "consciousness" issue; early work examined phobias

SHOUT
SHARE
IT

History and Approaches

- **Psychodynamic** — based on Freud's theory
  - focuses on the role of the unconscious mind and its influence on conscious behavior, early childhood experiences, development of sense of self, and other motivations
- **Behavioral** — based on early work of Watson and later B. F. Skinner
  - focuses on how behavioral responses are learned through classical or operant conditioning
- **Humanistic** — two pioneers are Carl Rogers and Abraham Maslow
  - focuses on human potential, free will, and possibility of self-actualization
- **Cognitive** — has roots in Gestalt psychology
  - focuses on memory, intelligence, perception, thought processes, problem solving, language, and learning

Psychology Now: Modern Perspectives

(no one single perspective is used to explain all human behavior and processes)

- **Sociocultural**
  - focuses on the behavior of individuals as the result of the presence (real or imagined) of other individuals, as part of groups, or as part of a larger culture
- **Biopsychological**
  - focuses on influences of hormones, brain structures and chemicals, disease, etc.; human and animal behavior is seen as a direct result of events in the body
- **Evolutionary**
  - focuses on the biological bases for universal mental characteristics, such as why we lie, how attractiveness influences mate selection, the universality of fear, and why we enjoy things like music and dance

Psychological Professionals and Areas of Specialization

(people working in the field of psychology have a variety of training experiences and different focuses)

psychologist

- has a doctorate degree (Ph.D., Psy.D., or Ed.D.) and works with either humans or animals in a variety of settings based on the area of specialization
- must be licensed to practice independently; typically does not prescribe medications but can go through specialized training to do so in a few states

psychiatrist

- medical doctor (M.D. or D.O.) that specializes in diagnosis and treatment of psychological disorders; can prescribe medication

psychiatric social worker

- has training in area of social work (M.S.W.) and often has a professional license to practice (L.C.S.W.)

Research Methods

scientific method
- perceiving the question about some empirical event for which you would like an explanation; can be derived from the goal of description: What is happening here?
- forming a hypothesis, a tentative explanation about an event
- testing the hypothesis by collecting data, analyzing results
- drawing conclusions about investigation's success or failure to explain event
- reporting your results; share exactly what, why, and how you did it, which provides means for replication

Psychology: The Scientific Methodology

(psychology uses the scientific method to try to determine facts and reduce uncertainty)

descriptive data collection methods
- **naturalistic observation:** observe people or animals in natural environment
- **laboratory observation:** observe people or animals in laboratory setting

can lead to formation of hypotheses that can later be tested

- **case studies:** individual is studied in greater detail, researchers try to learn everything they can about the individual
- **surveys:** ask questions about topic researchers are studying via telephone, Internet, or a questionnaire

correlation
- is a measure of relationship between two or more variables (anything that can change or vary)
- produces a value called the *correlation coefficient* that represents both direction and strength of relationship
- does not prove causation—variables can be related but you can not assume that one of them causes the other to occur

Finding Relationships

(different ways to find out more than just descriptions of behavior)

experiments
the only research method that will allow researchers to determine the cause of a behavior by deliberately manipulating some variable and measuring changes in the variable of interest

- **operational definition** specifically names the steps or procedures used to control or measure the variable in the experiment
  - independent variable is the variable that is manipulated, it is independent of anything participants do
  - dependent variable is the measure used to evaluate the manipulation of the independent variable
- **groups**
  - **experimental:** gets the independent variable or experimental manipulation
  - **control:** receives no treatment or treatment that should not have an effect

random assignment to conditions is the best way to assure control over extraneous variables or confounding variables, variables that interfere with each other, and/or on the variable of interest

- **hazards**
  - **placebo effect:** beliefs or expectations about a study can influence their behavior
  - **experimenter effect:** experimenter's biases can affect or influence participants' behavior

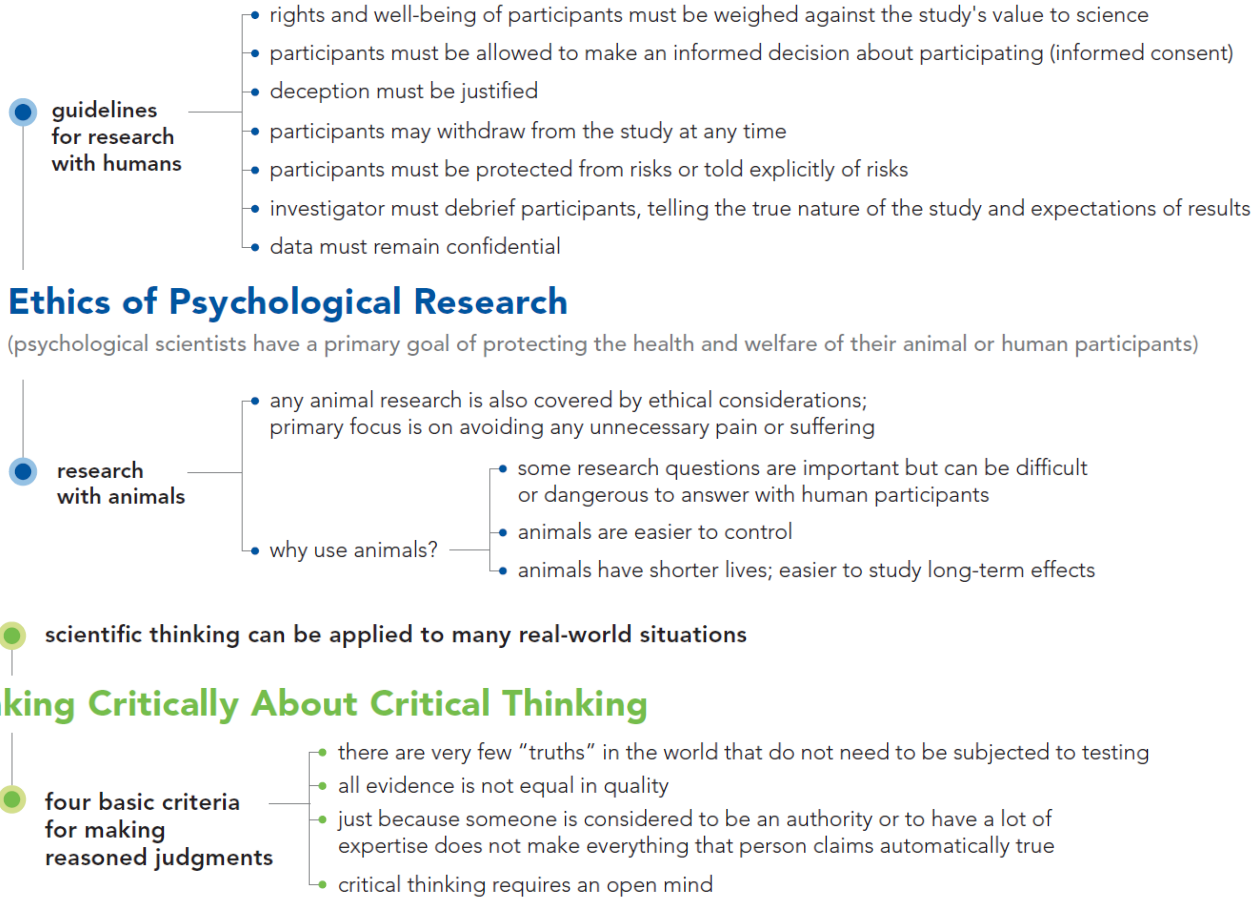
can be controlled through single-blind (participant "blind" to treatment/condition) and double-blind studies where the experimenter measuring the dependent variable does not know the treatment/condition associated with the data

Statistics in Psychology

descriptive statistics (a way of organizing numbers and summarizing them so they can be understood)
- **measures of central tendency** summarize the data and provide one typical score
  - **mean:** mathematic average of scores
  - **median:** middle score
  - **mode:** most frequent score
- **measures of variability** indicate how spread out the data are; measured in two ways
  - **range** is the difference between the highest and lowest scores
  - **standard deviation:** how much each score deviates, on average, from the mean
- **frequency distribution:** scores represented in graph or pictorial form
  - **normal (bell) curve:** represents average score in any distribution
  - **positively skewed:** a concentration of scores on the low end
  - **negatively skewed:** a concentration of scores on the high end
  - **bimodal:** indicates two high points, rather than one

inferential statistics (statistical techniques used to determine difference between meaningful vs. chance results)
- **statistical significance:** a true or real difference between scores on a data set Determined by
  - *t*-test
  - *F*-test (analysis of variance)
  - chi square

Research Methods


guidelines for research with humans
rights and well-being of participants must be weighed against the study's value to science
participants must be allowed to make an informed decision about participating (informed consent)
deception must be justified
participants may withdraw from the study at any time
participants must be protected from risks or told explicitly of risks
investigator must debrief participants, telling the true nature of the study and expectations of results
data must remain confidential
Ethics of Psychological Research
(psychological scientists have a primary goal of protecting the health and welfare of their animal or human participants)
research with animals
any animal research is also covered by ethical considerations; primary focus is on avoiding any unnecessary pain or suffering
why use animals?
some research questions are important but can be difficult or dangerous to answer with human participants
animals are easier to control
animals have shorter lives; easier to study long-term effects
scientific thinking can be applied to many real-world situations
Thinking Critically About Critical Thinking
four basic criteria for making reasoned judgments
there are very few "truths" in the world that do not need to be subjected to testing
all evidence is not equal in quality
just because someone is considered to be an authority or to have a lot of expertise does not make everything that person claims automatically true
critical thinking requires an open mind

1.1 p. 12

What Is Psychology?

(is the scientific study of behavior and mental processes)

- it has methods for studying phenomena
- it has four primary goals
  - describe
  - explain
  - predict
  - control

1.2 1.3 pp. 12–13

Psychology Then: The History of Psychology

(has roots in several disciplines, including philosophy, medicine, and physiology, and has developed through several perspectives)

- A relatively new science that formally began in 1879 when Wilhelm Wundt ("father of psychology") established the first psychological laboratory in Leipzig, Germany

was a student of Wundt's

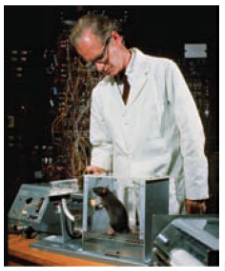
- **Structuralism** founded by Edward Titchener
- **Functionalism** founded by William James
- **Gestalt psychology** founded by Max Wertheimer
- **Psychoanalysis** ideas put forth by Sigmund Freud

- **Behaviorism** associated with work of John B. Watson, who was greatly influenced by Ivan Pavlov's work in conditioning/learning

1.4 p. 19

Psychology Now: Modern Perspectives

(no one single perspective is used to explain all human behavior and processes)



- **Psychodynamic** based on Freud's theory
- **Behavioral** based on early work of Watson and later B. F. Skinner
- **Humanistic** two pioneers are Carl Rogers and Abraham Maslow
- **Cognitive** has roots in Gestalt psychology
- **Sociocultural**
- **Biopsychological**
- **Evolutionary**

1.5 p. 19

Psychological Professionals and Areas of Specialization

(people working in the field of psychology have a variety of training experiences and different focuses)

- psychologist
- psychiatrist
- psychiatric social worker

1.6 1.7 1.8 p. 25

Psychology: The Scientific Methodology

(psychology uses the scientific method to try to determine facts and reduce uncertainty)

- **scientific method**
  - perceiving the question
  - forming a hypothesis
  - testing the hypothesis
  - drawing conclusions
  - reporting your results
- **descriptive data collection methods**
  - naturalistic observation
  - laboratory observation
  - case studies
  - surveys

1.9 1.10 1.11 1.12 p. 35

Finding Relationships

(different ways to find out more than just descriptions of behavior)

- **correlation**
  - is a measure of relationship between two or more variables
  - produces a value called the *correlation coefficient*
  - does not prove causation
- **experiments** the only research method that will allow researchers to determine the cause of a behavior by deliberately manipulating some variable and measuring changes in the variable of interest
  - **operational definition** specifically names the steps or procedures used to control or measure the variable in the experiment
  - **groups** include both experimental and control
  - **hazards** may include the placebo effect, experimenter effects, and extraneous variables

1.13 p. 35

Ethics of Psychological Research

(psychological scientists have a primary goal of protecting the health and welfare of their animal or human participants)

- **guidelines for research with humans**
  - rights and well-being of participants must be weighed against the study's value to science
  - participants must be allowed to make an informed decision about participating (informed consent)
  - deception must be justified
  - participants may withdraw from the study at any time
  - participants must be protected from risks or told explicitly of risks
  - investigator must debrief participants, telling the true nature of the study and expectations of results
  - data must remain confidential
- **research with animals**

1.14 p. 38

- **scientific thinking can be applied to many real-world situations**

Thinking Critically About Critical Thinking

- **four basic criteria for making reasoned judgments**
  - there are very few "truths" in the world that do not need to be subjected to testing
  - all evidence is not equal in quality
  - just because someone is considered to be an authority or to have a lot of expertise does not make everything that person claims automatically true
  - critical thinking requires an open mind